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CROWN RING, INC.

IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

TRENT WEST,

Plaintiff,

v.

JEWELRY INNOVATIONS, INC., TOSYALI INERNATIONAL, INC., (d.b.a. BENCHMARK), DIAMOND NORTHSTAR, INC., (d.b.a. TUNGSTEN MAGNUM), A JAMAIS DESIGNS, INC. (d.b.a. INFINITY RINGS), and CROWN RING, INC.,

Defendants,

and Related Counterclaims

CASE NO. C 5:07-cv-01812-JF (HRL)

DEFENDANT CROWN RING, INC.'S [PROPOSED] SECOND AMENDED PRELIMINARY INVALIDITY CONTENTIONS

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In accordance with the Local Patent Rules 3-3 and 3-7, Defendant Crown Ring, Inc. ("Crown Ring") submits the following Second Amended Preliminary Invalidity Contentions with respect to the U.S. Patent Nos. 6,928,734 ("the '734 patent"), 6,990,736 ("the '736 patent"), 7,032,314 ("the '314 patent") and 7,076,972 ("the '972 patent") (collectively, "Patents in suit").

Crown Ring incorporates, in full, all prior art references cited in the Patents in suit and their prosecution histories.

The disclosures and contentions herein are based on the Court's claim construction order dated April 10, 2008 and Plaintiff's First Amended Infringement Contentions Against Crown Ring filed on October 28, 2008. Plaintiff has identified, in his First Amended Infringement Contentions, claims 16, 18, 29, 33, 34 and 35 of the '734 patent, claims 1, 10, 14 and 19 of the '314 patent, claims 1, 10 and 24 of the '736 patent, and claims 1, 5 and 6 of the '972 patent as being infringed. Further, Plaintiff's counsel has confirmed in writing that the above-identified claims are the only claims on which Plaintiff bases his patent infringement allegations in this case. Accordingly, these Second Amended Preliminary Invalidity Contentions discusses the identified claims only.

Crown Ring bases the Second Amended Preliminary Invalidity Contentions on information reasonably available to it at this time, and reserves the right to further amend, modify, or supplement the contentions and to identify additional prior art references or additional bases for invalidity of the asserted claims should new information be brought to its attention.

I. INTRODUCTION

The Patents in suit generally relate to the methods of making tungsten carbide jewelry by forming a basic ring by sintering tungsten carbide and then adding various decorative features to the basic ring. It is a well-known fact that tungsten carbide technology was developed on behalf of the General Electric Company in the 1920s in connection with the incandescent light bulb filaments. A U.S. patent by a German inventor Karl Schroeter assigned to GE and dating back to 1925, teaches consolidating tungsten and tungsten alloy powder into hard bodies and subsequently sintering the bodies. An article by Raghunathan et al. summarizes the state of the art on tungsten carbide technologies in the 1990s, more than a year before the alleged Plaintiff's invention. The Patents in suit teach application of the known tungsten carbide technology to

form a jewelry ring and further add commonly known decorative features to the ring.

II. PATENT L.R. 3-3(a)

Crown Ring identifies the following items of prior art that either anticipate or render obvious the asserted claims of the Patents in suit.

1. Article by Raghunathan et al. "Tungsten carbide technologies" (1996), Advanced Materials & Processes, April 96, pp. 21-23 (Exh. 2 to Declaration of R. Joseph Trojan ("Trojan Decl.") previously submitted with Crown Ring's Preliminary Invalidity Contentions) ("Raghunathan et al.")
2. U.S. Patent No. 1,551,333 issued August 25, 1925 (Exh. 1 to Trojan Decl.) ("'333 patent")
3. U.S. Patent No. 2,747,259 issued May 29, 1956 (Exh. 6 to Trojan Decl.) ("'259 patent")
4. U.S. Patent No. 1,594,885 issued August 8, 1926 (Exh. 9 to Trojan Decl.) ("'885 patent")
5. U.S. Patent No. D53,040 issued March 4, 1919 (Exh. 10 to Trojan Decl.) ("'040 patent")
6. U.S. Patent No. D113,692 issued March 7, 1939 (Exh. 11 to Trojan Decl.) ("'692 patent")
7. U.S. Patent No. D137,743 issued April 25, 1944 (Exh. 12 to Trojan Decl.) ("'743 patent")
8. U.S. Patent No. 1,254,791 issued January 29, 1918 (Exh. 14 to Trojan Decl.) ("'791 patent")
9. U.S. Patent No. 3,669,695 issued June 13, 1972 to Iler, et al. ("Iler")
10. U.S. Patent No. 6,020,826 issued February 1, 2000 to Rein ("Rein"): it has priority date of November 11, 1994 based on DE 44 43 253 (Germany)
11. U.S. Patent No. 3,242,664 issued March 29, 1966 to Lederrey ("Lederrey")

12. U.S. Patent No. 2,050,253 issued August 11, 1936 to Bager ("Bager")
13. JP 64-008245 (Japan) issued January 12, 1989 to Maruyama, et al. ("Maruyama")
14. U.S. Patent No. 5,431,028 issued July 11, 1995 to Lampert, et al. ("Lampert")
15. JP 61-177351 (Japan) issued August 9, 1986 to Nippon Tungsten KK[NIUB], et al. ("Nippon Tungsten")
16. U.S. Patent No. 3,719,479 issued March 6, 1973 to Flanagan ("Flanagan")
17. U.S. Patent No. 1,863,618 issued June 21, 1932 to Brogan ("Brogan")
18. U.S. Patent No. 3,837,163 issued September 24, 1974 to Fujimori ("Fujimori")
19. AU 208883 (Australia) issued August 9, 1956 to Hawke (Aust.) Limited. ("Hawke")
20. U.S. Patent No. 5,003,678 issued April 2, 1991 to Oganesyan ("Oganesyan")
21. Lawrence Stanley's tungsten carbide finger ring modified from a tungsten carbide bushing or guide ring ("Stanley" or "Stanley ring"): The Stanley ring is a tungsten carbide finger ring which was modified from a tungsten carbide bushing or guide ring by Lawrence Stanley in or around 1991 at his place of employment, Yilik Precision Industries, Inc. ("Yilik"). Stanley wore the finger ring for a period of approximately six months thereafter, during which he showed it to the public (*e.g.*, at diner club). *See* the transcript of the deposition of Lawrence Stanley conducted on August 7, 2008 and the Exhibits attached thereto.
22. General Carbide's and/or Edwin A. McKinnon's tungsten carbide blanks and method of making the same ("McKinnon"): The compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon. It was General Carbide that manufactured the annular blanks used for West' tungsten carbide ring according to its own compositions/formula and method known in the prior art. Further, prior to Trent West, General Carbide had manufactured lots of tungsten carbide rings in various dimensions, using the same method as used in making the annular blanks for West's tungsten carbide rings. *See* the transcript of the deposition of Edwin A. McKinnon

conducted on September 3, 2008 and the Exhibits attached thereto.

23. Plaintiff Trent West's own admissions ("West"): West has admitted that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring as well as the method of making tungsten carbide blanks were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape including a shape of a pipe. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. *See* the transcript of the deposition of Trent West conducted on June 3, 2008 and the Exhibits attached thereto.

III. PATENT L.R. 3-3(b)

The asserted claims of the Patents in suit are anticipated or rendered obvious in light of the prior art references as shown below. Crown Ring's contentions are in no way an admission or suggestion that a specific reference does not independently anticipate the asserted claims. Also, provided below are a few exemplary, but not exhaustive, motivations to combine the prior art references.

A. Invalidity under 35 U.S.C. § 102(f)

All of the asserted claims of the Patents in suit are invalid because the subject matter of the claims was not invented by Trent West. Trent West has admitted that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring (the subject matter of the asserted claims), the method of making tungsten carbide blanks, and sintering, grinding, shaping, and polishing were well known in the prior art and were not invented by him. McKinnon testified that the compositions/formula of tungsten carbide material

used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon. Accordingly, it is McKinnon, not West, who developed the compositions/formula of tungsten carbide. For West's tungsten carbide ring, McKinnon simply chose the compositions/formula of tungsten carbide material among a number of compositions/formula that McKinnon or General Carbide had developed. Further, West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art. Moreover, a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings by grinding and shaping. For example, a grind shop named Hagel & Zeller made West's first tungsten carbide ring. *See* the Deposition of Trent West, p. 58, lines 18-24. The remaining features, such as designs and inlays, also were not invented by West as they were commonly known in the field of jewelry articles, as shown in the prior art references discussed in the claim charts below.

B. Unenforceability Due to Fraud and Inequitable Conduct

As stated above, Trent West has admitted that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring (the subject matter of the asserted claims), the method of making tungsten carbide blanks, and sintering, grinding, shaping, and polishing were well known in the prior art and were not invented by him. In particular, McKinnon has testified that the compositions/formula of tungsten carbide material were developed and chosen by McKinnon himself. The specifications of the Patents in suit describe that the very hard, durable and scratch-resistant properties inherent in the compositions/formula of the tungsten carbide material are the key feature of the subject matter claimed in the Patents in suit. West, however, intentionally concealed the fact that McKinnon is the inventor for the compositions/formula, thereby committing a fraud to the U.S. Patent Office. As a result of West's fraud and inequitable conduct, all of the Patents in suit are unenforceable.

C. Anticipating Prior Art

Iler anticipates all of the asserted claims of the '734 patent and all of the asserted claims of the '314 patent. Stanley ring anticipates at least claims 16, 18, 33, and 35 of the '734 patent

and claim 1 of the '314 patent.

D. Obviousness

a. Identification of Combinations of Prior Art

The following list identifies combinations of prior art that Crown Ring presently intends to rely on for its contentions that the asserted claims of the Patents in suit are obvious.

Claims 16, 18, and 33 of the '734 patent

(1) The '333 patent, in combination with Raghunathan et al.

(2) Raghunathan et al. by itself, or in combination with the knowledge in the art.

(3) Iler by itself, or in combination with the knowledge in the art.

(4) Iler, in combination with Stanley ring.

(5) Iler, in view of any of Raghunathan et al., Fujimora, Flanagan, Nippon Tungsten, Maruyama, Lederrey, and Rein, or any combination thereof.

(6) Rein, in combination with the knowledge in the art.

(7) Rein, in combination of Raghunathan et al.

(8) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof.

(9) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(10) Bager, in combination with Iler.

(11) Bager, in combination of Raghunathan et al.

(12) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof.

(13) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

Claim 29 of the '734 patent

(1) The '333 patent, in combination with Raghunathan et al.

(2) Raghunathan et al. by itself, or in combination with the knowledge in the art.

(3) Iler by itself, or in combination with the knowledge in the art.

(4) Iler, in combination with Stanley ring.

(5) Iler, in view of any of Raghunathan et al., Fujimora, Flanagan, Nippon Tungsten, Maruyama, Lederrey, and Rein, or any combination thereof.

(6) Rein, in combination with the knowledge in the art.

(7) Rein, in combination of Raghunathan et al.

(8) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof.

(9) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(10) Bager, in combination with Iler.

(11) Bager, in combination of Raghunathan et al.

(12) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof.

(13) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(14) The '333 patent, in combination with Raghunathan et al., and further in view of any of Oganesyan, Hawke, Brogan, Bager, Lederrey, Rein, Iler, or any combination thereof.

(15) Raghunathan et al., in view of any of Oganesyan, Hawke, Brogan, and Lederrey, or any combination thereof.

(16) Iler, in view of any of Oganesyan, Hawke, and Brogan, or any combination thereof.

(17) Iler, in combination with Stanley ring, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

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(18) Iler, in view of any of Raghunathan et al., Fujimora, Flanagan, Nippon Tungsten, Maruyama, Lederrey, and Rein, or any combination thereof, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(19) Rein, in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(20) Rein, in combination of Raghunathan et al., and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(21) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(22) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(23) Stanley ring, in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

Claim 34 of the '734 patent

(1) The '333 patent, in combination with Raghunathan et al.

(2) Raghunathan et al. by itself, or in combination with the knowledge in the art.

(3) Iler by itself, or in combination with the knowledge in the art.

(4) Iler, in combination with Stanley ring.

(5) Iler, in view of any of Raghunathan et al., Fujimora, Flanagan, Nippon Tungsten, Maruyama, Lederrey, and Rein, or any combination thereof.

(6) Rein, in combination with the knowledge in the art.

(7) Rein, in combination of Raghunathan et al.

(8) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof.

(9) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(10) Bager, in combination with Iler.

(11) Bager, in combination of Raghunathan et al.

(12) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof.

(13) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(14) The '333 patent, in combination with Raghunathan et al., and further in view of any of Lampert and Iler, or combination thereof.

(15) Raghunathan et al., in combination with Lampert.

(16) Iler, in combination with Lampert.

(17) Iler, in combination with Stanley ring, and further in view of Lampert.

(18) Iler, in view of any of Raghunathan et al., Fujimora, Flanagan, Nippon Tungsten, Maruyama, Lederrey, and Rein, or any combination thereof, and further in view of Lampert.

(19) Rein, in combination with Lampert.

(20) Rein, in combination of Raghunathan et al., and further in view of Lampert.

(21) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Lampert.

(22) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(23) Bager, in combination with Iler, and further in view of Lampert.

(24) Bager, in combination of Raghunathan et al., and further in view of Lampert.

(25) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Lampert.

(26) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

Claim 35 of the '734 patent

(1) The '333 patent, in combination with Raghunathan et al.

(2) Raghunathan et al. by itself, or in combination with the knowledge in the art.

(3) Iler by itself, or in combination with the knowledge in the art.

(4) Iler, in combination with Stanley ring.

(5) Iler, in view of any of Raghunathan et al., Fujimora, Flanagan, Nippon Tungsten, Maruyama, Lederrey, and Rein, or any combination thereof.

(6) Rein, in combination with the knowledge in the art.

(7) Rein, in combination of Raghunathan et al.

(8) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof.

(9) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(10) Bager, in combination with Iler.

(11) Bager, in combination of Raghunathan et al.

(12) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof.

(13) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(14) The '333 patent, in combination with Raghunathan et al., and further in view of any of Oganesyan, Hawke, Brogan, Bager, Lederrey, Rein, Iler, and Lampert, or any combination thereof.

(15) Raghunathan et al., in view of any of Oganesyan, Hawke, Brogan, Lederrey, and

Lampert, or any combination thereof.

(16) Iler, in view of any of Oganesyan, Hawke, Brogan, and Lampert, or any combination thereof.

(17) Iler, in combination with Stanley ring, and further in view of any of Oganesyan, Hawke, Brogan, Bager, and Lampert, or any combination thereof.

(18) Iler, in view of any of Raghunathan et al., Fujimora, Flanagan, Nippon Tungsten, Maruyama, Lederrey, and Rein, or any combination thereof, and further in view of any of Oganesyan, Hawke, Brogan, Bager, and Lampert, or any combination thereof.

(19) Rein, in view of any of Oganesyan, Hawke, Brogan, Bager, and Lampert, or any combination thereof.

(20) Rein, in combination of Raghunathan et al., and further in view of any of Oganesyan, Hawke, Brogan, Bager, and Lampert, or any combination thereof.

(21) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of any of Oganesyan, Hawke, Brogan, Bager, and Lampert, or any combination thereof.

(22) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Oganesyan, Hawke, Brogan, Bager, and Lampert, or any combination thereof.

(23) Stanley ring, in view of any of Oganesyan, Hawke, Brogan, Bager, and Lampert, or any combination thereof.

Claims 1, 10, and 24 of the '736 patent

(1) Raghunathan et al., in view of any of Hawke, Bager, and the '259 patent, or any combination thereof.

(2) Raghunathan et al., in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan.

(3) Raghunathan et al., in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan, and further in view of Lederrey.

(4) Raghunathan et al., in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan, and further in view of Lederrey, and further in view of any of Oganesyan and Brogan, or combination thereof.

(5) Iler, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof.

(6) Iler, in view of Raghunathan et al., and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof.

(7) Iler, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of Lederrey.

(8) Iler, in view of Raghunathan et al., and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of Lederrey.

(9) Iler, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof.

(10) Iler, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan.

(11) Iler, in view of Raghunathan et al., and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof.

(12) Iler, in view of Raghunathan et al., and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of

Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan.

(13) Iler, in view of Raghunathan et al., and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan, and further in view of Lederrey.

(14) Iler, in view of Raghunathan et al., and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of Lederrey, and further in view of any of Oganesyan and Brogan, or combination thereof.

(15) Iler, in view of Raghunathan et al., and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan, and further in view of Lederrey, and further in view of any of Oganesyan and Brogan, or combination thereof.

(16) Rein, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof.

(17) Rein, in combination of Raghunathan et al., and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof.

(18) Rein, in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof.

(19) Rein, in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan, and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof.

(20) Rein, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of Lederrey.

(21) Rein, in combination of Raghunathan et al., and further in view of any of Hawke,

Bager, and the '259 patent, or any combination thereof, and further in view of Lederrey.

(22) Rein, in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of Lederrey.

(23) Rein, in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan, and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of Lederrey.

(24) Rein, in view of any of Fujimora, Nippon Tungsten, and Maruyama, or any combination thereof, and further in view of Flanagan, and further in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of Lederrey, and further in view of any of Oganesyan and Brogan, or combination thereof.

(25) Stanley ring, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof.

(26) Stanley ring, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Oganesyan and Brogan, or combination thereof.

(27) Stanley ring, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Oganesyan and Brogan, or combination thereof, and further in view of Lederrey.

(28) Stanley ring, in view of any of Hawke, Bager, and the '259 patent, or any combination thereof, and further in view of any of Oganesyan and Brogan, or combination thereof, and further in view of Lederrey, and further in view of Flanagan.

Claims 1 and 19 of the '314 patent

(1) Raghunathan et al., in view of any of the '885, '040, '692, and '743 patents, or any combination thereof.

(2) Iler.

(3) Iler, in combination with Raghunathan et al.

(4) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(5) Iler, in combination with Lampert.

(6) Iler, in combination with Raghunathan et al., and further in view of Lampert.

(7) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(8) Rein

(9) Rein, in combination with Raghunathan et al.

(10) Rein, in combination with Iler.

(11) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(12) Rein, in combination with Lampert.

(13) Rein, in combination with Raghunathan et al., and further in view of Lampert.

(14) Rein, in combination with Iler., and further in view of Lampert.

(15) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(16) Bager, in combination with Raghunathan et al.

(17) Bager, in combination with Iler.

(18) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(19) Bager, in combination with Raghunathan et al., and further in view of Lampert.

(20) Bager, in combination with Iler., and further in view of Lampert.

(21) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(22) Stanley ring.

(23) Stanley ring, in combination with Lampert.

(24) Stanley ring, in combination with Lederrey, and further in view of Flanagan.

Claims 10 and 14 of the '314 patent

(1) Raghunathan et al., in view of any of the '885, '040, '692, and '743 patents, or any combination thereof.

(2) Iler.

(3) Iler, in combination with Raghunathan et al.

(4) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(5) Iler, in combination with Lampert.

(6) Iler, in combination with Raghunathan et al., and further in view of Lampert.

(7) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(8) Rein

(9) Rein, in combination with Raghunathan et al.

(10) Rein, in combination with Iler.

(11) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(12) Rein, in combination with Lampert.

(13) Rein, in combination with Raghunathan et al., and further in view of Lampert.

(14) Rein, in combination with Iler., and further in view of Lampert.

(15) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(16) Bager, in combination with Raghunathan et al.

(17) Bager, in combination with Iler.

(18) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(19) Bager, in combination with Raghunathan et al., and further in view of Lampert.

(20) Bager, in combination with Iler., and further in view of Lampert.

(21) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(22) Stanley ring.

(23) Stanley ring, in combination with Lampert.

(24) Stanley ring, in combination with Lederrey, and further in view of Flanagan.

(25) Raghunathan et al., in view of any of the '885, '040, '692, and '743 patents, or any combination thereof, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(26) Iler, in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(27) Iler, in combination with Raghunathan et al., and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(28) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(29) Iler, in combination with Lampert, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(30) Iler, in combination with Raghunathan et al., and further in view of Lampert, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(31) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof

(32) Rein, in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(33) Rein, in combination with Raghunathan et al., and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(34) Rein, in combination with Iler, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(35) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(36) Rein, in combination with Lampert, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(37) Rein, in combination with Raghunathan et al., and further in view of Lampert, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(38) Rein, in combination with Iler., and further in view of Lampert, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(39) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(40) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(41) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(42) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Oganesyan, Hawke, and Brogan, or any combination thereof.

(43) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of any of Oganesyan, Hawke, and Brogan, or any combination thereof.

(44) Stanley ring, in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(45) Stanley ring, in combination with Lampert, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

(46) Stanley ring, in combination with Lederrey, and further in view of Flanagan, and further in view of any of Oganesyan, Hawke, Brogan, and Bager, or any combination thereof.

Claims 1, 5, and 6 of the '972 patent

(1) Raghunathan et al., in view of the '259 patent, and further in view of the '791 patent, and further in view of any of the '040, '692, and '743 patents, or any combination thereof.

(2) Iler.

(3) Iler, in combination with Raghunathan et al.

(4) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any

combination thereof, and further in view of Flanagan.

(5) Iler, in combination with Lampert.

(6) Iler, in combination with Raghunathan et al., and further in view of Lampert.

(7) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(8) Rein

(9) Rein, in combination with Raghunathan et al.

(10) Rein, in combination with Iler.

(11) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(12) Rein, in combination with Lampert.

(13) Rein, in combination with Raghunathan et al., and further in view of Lampert.

(14) Rein, in combination with Iler., and further in view of Lampert.

(15) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(16) Bager, in combination with Raghunathan et al.

(17) Bager, in combination with Iler.

(18) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(19) Bager, in combination with Raghunathan et al., and further in view of Lampert.

(20) Bager, in combination with Iler., and further in view of Lampert.

(21) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(22) Stanley ring.

(23) Stanley ring, in combination with Lampert.

(24) Stanley ring, in combination with Lederrey, and further in view of Flanagan.

(25) Raghunathan et al., in view of the '259 patent, and further in view of the '791 patent, and further in view of any of the '040, '692, and '743 patents, or any combination thereof, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(26) Iler, in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(27) Iler, in combination with Raghunathan et al., and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(28) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(29) Iler, in combination with Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(30) Iler, in combination with Raghunathan et al., and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(31) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof

(32) Rein, in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(33) Rein, in combination with Raghunathan et al., and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(34) Rein, in combination with Iler, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(35) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

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(36) Rein, in combination with Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(37) Rein, in combination with Raghunathan et al., and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(38) Rein, in combination with Iler., and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(39) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(40) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan.

(41) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert.

(42) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Hawke and Brogan, or combination thereof.

(43) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of any of Hawke and Brogan, or combination thereof.

(44) Stanley ring, in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(45) Stanley ring, in combination with Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(46) Stanley ring, in combination with Lederrey, and further in view of Flanagan, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof.

(47) Iler, in view of the '259 patent.

(48) Iler, in combination with Raghunathan et al., and further in view of the '259 patent.

(49) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of the '259 patent.

(50) Iler, in combination with Lampert, and further in view of the '259 patent.

(51) Iler, in combination with Raghunathan et al., and further in view of Lampert, and further in view of the '259 patent.

(52) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of the '259 patent.

(53) Rein, in view of the '259 patent.

(54) Rein, in combination with Raghunathan et al., and further in view of the '259 patent.

(55) Rein, in combination with Iler, and further in view of the '259 patent.

(56) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of the '259 patent.

(57) Rein, in combination with Lampert, and further in view of the '259 patent.

(58) Rein, in combination with Raghunathan et al., and further in view of Lampert, and further in view of the '259 patent.

(59) Rein, in combination with Iler., and further in view of Lampert, and further in view of the '259 patent.

(60) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of the '259 patent.

(61) Bager, in combination with Raghunathan et al., and further in view of the '259 patent.

(62) Bager, in combination with Iler, and further in view of the '259 patent.

(63) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of the '259 patent.

(64) Bager, in combination with Raghunathan et al., and further in view of Lampert, and further in view of the '259 patent.

(65) Bager, in combination with Iler., and further in view of Lampert, and further in view of the '259 patent.

(66) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of the '259 patent.

(67) Stanley ring, in view of the '259 patent.

(68) Stanley ring, in combination with Lampert, and further in view of the '259 patent.

(69) Stanley ring, in combination with Lederrey, and further in view of Flanagan, and further in view of the '259 patent.

(70) Iler, in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(71) Iler, in combination with Raghunathan et al., and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(72) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(73) Iler, in combination with Lampert, and further in view of any of Hawke, Brogan,

and Bager, or any combination thereof, and further in view of the '259 patent.

(74) Iler, in combination with Raghunathan et al., and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(75) Iler, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(76) Rein, in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(77) Rein, in combination with Raghunathan et al., and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(78) Rein, in combination with Iler, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(79) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(80) Rein, in combination with Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(81) Rein, in combination with Raghunathan et al., and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(82) Rein, in combination with Iler., and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(83) Rein, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(84) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of the '259 patent.

(85) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of the '259 patent.

(86) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of any of Hawke and Brogan, or combination thereof, and further in view of the '259 patent.

(87) Bager, in view of any of Fujimora, Nippon Tungsten, Maruyama, and Lederrey, or any combination thereof, and further in view of Flanagan, and further in view of Lampert, and further in view of any of Hawke and Brogan, or combination thereof, and further in view of the '259 patent.

(88) Stanley ring, in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(89) Stanley ring, in combination with Lampert, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

(90) Stanley ring, in combination with Lederrey, and further in view of Flanagan, and further in view of any of Hawke, Brogan, and Bager, or any combination thereof, and further in view of the '259 patent.

b. Motivation for Combining Identified Combinations of Prior Art

A person of ordinary skill in the art would have been motivated to combine each of the above-referenced combinations of prior art. As admitted and testified by West and McKinnon, the compositions/formula of tungsten carbide material used for West's tungsten carbide ring (which is the subject matter of the asserted claims of the Patents in suit), the method of making tungsten carbide blanks, and sintering, grinding, shaping, and polishing the same were well known in the prior art. Also, very hard and scratch-resistant characteristics of tungsten carbide material were well known in the prior art. A person of ordinary skill in the art would have been motivated to combine the teachings of the prior art references for jewelry articles (*e.g.*, Rein, Iler, Bager) with the well-known tungsten carbide technology, in order to make hard and scratch-resistant jewelry articles such as a finger ring. Further, the selection of a known material based upon its suitability for the intended use is a design consideration within the skill of the art. In re Leshin, 227 F.2d 197, 125 U.S.P.Q. 416 (CCPA 1960).

Moreover, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 220 F.2d 454, 456, 105 U.S.P.Q. 233, 235 (CCPA 1955); In re Reese, 290 F.2d 839, 129 U.S.P.Q. 402 (CCPA 1961) (the optimization of proportions in a prior art device is a design consideration within the skill of the art). Accordingly, if Plaintiff argues that certain prior art reference identified above does not expressly disclose the ranges of tungsten carbide compositions required in the asserted claims, such reference still renders the claims obvious pursuant to the precedent.

In addition, a person of ordinary skill in the art would have been motivated to apply the teachings of the prior art references for watch cases and bracelets (*e.g.*, Nippon Tungsten, Lederrey, Maruyama) in making a finger ring because watch cases and bracelets are considered as jewelry articles. The subject matter of the asserted claims of the Patents in suit is not more complicated than the watch cases and bracelets disclosed in the prior art references, and it would have been obvious for a person of ordinary skill in the art to try the combination.

Also, it would have been an obvious matter of design choice to a person of ordinary skill in the art, at the time of the invention, to provide a finger ring with design details, such as one or more facets, groove(s), slot(s), gems or metal inlays, etc., in order to provide the desired aesthetic effect of the ring. It has been held that matters relating to ornamentation only which have no mechanical function cannot be relied upon to patentably distinguish the claimed invention from the prior art. In re Seid, 161 F.2d 229, 73 U.S.P.Q. 431 (CCPA 1947). Further, a change in the shape of a prior art device is an obvious design consideration within the skill of the art. In re Dailey, 357 F.2d 669, 149 U.S.P.Q. 47 (CCPA 1966).

For example, as previously stated in Crown Ring's Preliminary Invalidity Contentions, the '333 patent teaches the basic technique of metallurgy in application to tungsten and its alloys. Raghunathan et al. describes making various objects, including ring-shaped objects, out of tungsten carbide powder by the use of powder consolidation, applying pressure, sintering and post sinter forming. The steps in the '333 patent and Raghunathan are identical to the steps described in the '734 patent. The '333 patent and Raghunathan do not teach using the ring-shaped objects in jewelry. However, the Supreme Court has stated, "When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one." KSR Intern. Co. v. Teleflex Inc. 127 S. Ct. 1727, 1740 (2007). It would have been obvious to a person of ordinary skill to use such ring-shaped objects in the field of jewelry making.

In another example, Raghunathan et al. does not teach any decorations for the ring-shaped tungsten carbide objects. However, the '259 patent teaches forming inlays of contrasting precious metals in a ring. The inlays are placed into depressions or "blind holes" in the ring, inserted and secured by brazing and soldering. These steps are identical to the steps taught by the '736 patents, except that the inlays are not in a form of a band that goes around the entire ring. Instead, the '259 patent teaches a series of shapes arranged in a row around the ring. It would have been obvious to one of skill in the art to convert a series of shapes arranged around the ring into a continuous band going around the ring as a variation in the design. The Supreme

Court has stated, "If a person of ordinary skill can implement a predictable variation, [35 U.S.C.] §103 likely bars its patentability." KSR *supra* at 1740. A person of ordinary skill, able to make tungsten carbide rings as described by Raghunathan et al., would be able to decorate the rings using the teachings of the '259 patent.

In still another example, the '885, the '040, the '692 and the '743 patents teach forming facets in a ring. The facets are polished to a variety of predetermined shapes. The Supreme Court has stated, "If a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." KSR *supra* at 1740. A person of ordinary skill, able to make tungsten carbide rings as described by Raghunathan et al., would recognize that facets on rings described in the '885, the '040, the '692 and the '743 patents would also improve the appearance of tungsten carbide rings. Forming facets by grinding is within the purview of a person of ordinary skill.

In still another example, Ragunathan et al. does not teach inlays, facets or polishing the facets into a mirror finish. However, each of these decorative techniques for jewelry rings has been described in the prior art. Specifically, the '259 patent teaches inlays, the '040, '692 and '743 patents each teach rings with facets, while the '791 patent teaches polishing jewelry to a mirror finish.

The Supreme Court stated, "If a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." KSR *supra* at 1740. A person of ordinary skill, able to make tungsten carbide rings as described by Raghunathan et al., would recognize that inlays, facets and polishing described in the '259, the '040, the '692, the '743 and the '791 patents respectively would also improve the appearance of tungsten carbide rings. Forming inlays, grinding and polishing are techniques within the purview of a person of ordinary skill.

The above-identified examples of combinations are given merely to illustrate various

motivations to combine and are not intended to provide an exhaustive list of every possible combination to which the motivation may apply. Nor is such a list required by Patent Rule 3-3. Crown Ring therefore reserves its right to contend that the above-described motivations to combine apply to other combinations.

IV. CLAIM CHARTS PER PATENT L.R. 3-3(c)

In the following Invalidity Claim Charts, Crown Ring has cited representative portions of identified references, even where a reference may contain additional support for a particular claim element. Persons of ordinary skill in the art at the time of the filing of the Patents in suit knew to read references as a whole, and in the context of other publications and literature and the general knowledge in the field. Crown Ring may rely on all such information, including uncited portions of the prior art references listed herein, and on other publications and expert testimony, to provide context and as aids to understanding and interpreting the listed references, or to establish that a person of ordinary skill in the art would have been motivated to modify or combine any of the cited references so as to render the claims obvious. Additionally, citations to a particular figure in a prior art reference encompass all text relating to the figure, and citations to text encompass all figures relating to that text.

'734 patent

Claim Language	**Prior Art**
Claim 16	
A method of providing a tungsten-carbide based annular jewelry article having a desired surface profile and including an annular band which comprises	Raghunathan et al., p. 21, Fig. 1, shows ring-shaped parts made of tungsten carbide. These parts were in existence at least by April of 1996. Fujimora teaches a method of providing a jewelry article made of a hard material comprising tungsten carbide that is ground and polished to a mirror finish. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45).

	Flanagan states, "if the ring shape is to be used for jewelry, e.g., a watch case". (col. 3, lines 38-40). Nippon Tungsten teaches a method of providing watch cases, necklaces, or other ornamental parts made of a hard alloy containing 82 weight percent tungsten carbide and metal binder materials. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics, and is suitable for jewelry articles. (English translation of Abstract; table 1 on page 254). Bager teaches a finger ring with rigidity of structure. Bager teaches "finishing the surfaces of said blank according to taste". (col. 1, lines 1-15). Lederrey teaches a method of providing a tungsten-carbide based jewelry article (watch case) having a desired surface profile and having an annular portion. (col. 1, lines 9-42; col. 1, line 65 – col. 2, line 8; col. 2, lines 25-29, 49-51, 55-60, and 67-69; col. 3, lines 3-6, 17-28, 37-40; col. 3, line 70 – col. 4, line 2; col. 5, lines 4-26, 33-57, and 63-67; Figs. 1 and 7). Rein teaches a finger ring (such as a wedding ring) made of tungsten carbide and having aesthetic appearance and shape. Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-14). West has admitted that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of

	any desired shape including a shape of a pipe. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon, and a tungsten-carbide based ring that has a desired surface profile and is the size of a wedding band would have been easily made of it (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches making annular jewelry articles comprising tungsten carbide (col. 2, lines 25-27; col. 5, line 74 through col. 6, line 8; col. 9, lines 56-58; col. 10, lines 9-10). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26), and states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry" (col. 5, lines 64-67). Also, Iler acknowledges scratch resistant watch cases of cobalt-bonded tungsten carbide compositions as prior art (col. 7, lines 46-48). Stanley testified that in or around 1991 he made a tungsten-carbide based annular jewelry ring having a desired surface profile, which was worn as a finger ring by Stanley for a period of approximately six months (Stanley deposition, p. 18 line 6 through p. 23 line 12; p. 24 line 7 through p. 37 line 5; p. 45 line 10 through p. 46 line 24; p. 48 line 21 through p. 50 line 7; Exhs. A and B; p. 52 lines 14-22).

providing a mixture of two or more powdered materials which consist essentially of at least 50 weight percent tungsten carbide	Raghunathan et al., p. 23 teaches using "WC aluminide composites (81% WC max)." Raghunathan et al., p. 21 teaches sintering tungsten carbide articles: "Most cemented carbides are manufactured by powder metallurgy process consisting of WC powder production, powder consolidation, sintering and post-sinter forming." Fujimora teaches providing a mixture of two or more powdered materials which consist essentially of 82 weight percent tungsten carbide. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Nippon Tungsten teaches providing a mixture of two or more powdered materials consisting essentially of 82 weight percent tungsten carbide. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics, and is suitable for jewelry articles. (English translation of Abstract; table 1 on page 254). Lederrey teaches providing a mixture of a powder of tungsten carbide and a powder of a bonding metal. (col. 1, lines 65-69). West has admitted that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring were known in the prior art and were not invented by him. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon. (McKinnon deposition, p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402,

	403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 153 line 24 through p. 154 line 9). Iler teaches providing a mixture of two or more powered materials which contains at least 50 weight percent tungsten carbide (col. 2, lines 15-32). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26). Stanley testified that his finger ring was made of a mixture of two or more powdered materials which consist essentially of at least 50 weight percent tungsten carbide (p. 32 lines 7-12; p. 33 lines 16-18; p. 52 lines 14-22).
to form the annular article into a pressure mold having a cavity of predetermined annular configuration and sized formed therein, the size of the mold being greater than the final size of the annular band;	Raghunathan et al., p. 21 teaches sintering tungsten carbide articles: "Most cemented carbides are manufactured by powder metallurgy process consisting of WC powder production, powder consolidation, sintering and post-sinter forming." Nippon Tungsten teaches that the powdered mixture is compression molded under 1.5 ton/cm^2. (English translation of Abstract). Lederrey states that the "mixture is then submitted to a preliminary sintering so as to form a solid block which can however still be machined easily for instance by means of a diamond tool. Pieces having a shape similar to that of the workpieces which are to be manufactured are then cut from said block and introduced into a furnace to carry out the final sintering thereof. During the last operation a shrinkage of about 20% by volume can be observed….The shape of the piece cut out of said block has to be calculated with respect to that of piece 1 while considering the shrinkage of about 20% by volume". (col. 1, line 70 – col. 2, line 7; col. 3, lines 24-27). West has admitted that the compositions/formula of tungsten carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of

	any desired shape including a shape of a pipe. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that, prior to Trent West, General Carbide had manufactured lots of tungsten carbide rings in various dimensions, using the same method as used in making the annular blanks for West's tungsten carbide rings. Also, McKinnon testified that it was well known in the prior art that the size of the mold should be greater than the final size of the annular band because tungsten carbide material shrinks during the sintering process (McKinnon deposition, p. 17 line 2 through p. 18 line 20; p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). The '333 patent teaches "such a metal can be brought to the desired form by taking the powder of the element, as in the case of tungsten, and molding it into the desired shape in a hydraulic press, after which it is heated in a neutral or reducing atmosphere to sinter" (Col. 1, lines 42-49). Iler teaches forming an annular jewelry article into a pressure mold having a cavity of predetermined annular configuration and sized formed therein (*e.g.*, col. 10, lines 1-59), the size of the mold being greater than the final size of the annular band (*e.g.*, col. 10, lines 50-51, 53). Stanley testified that he formed the annular article into a pressure mold having a cavity of predetermined annular configuration and sized formed therein, where the size of the mold was greater than the final size of the annular band (p. 25 lines 7-13; p. 26 lines 1-6).
compressing the powdered material mixture at a pressure sufficient to form an annular blank; and	Raghunathan et al., p.21, teaches "The powder is consolidated […] by pressing and extrusion." Nippon Tungsten teaches that the powdered mixture is

	compression molded under 1.5 ton/cm^2. (English translation of Abstract). Lederrey states that the "mixture is then submitted to a preliminary sintering so as to form a solid block which can however still be machined easily for instance by means of a diamond tool. Pieces having a shape similar to that of the workpieces which are to be manufactured are then cut from said block and introduced into a furnace to carry out the final sintering thereof." (col. 1, line 70 – col. 2, line 7; col. 3, lines 17-21). West has admitted that the compositions/formula of tungsten carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape including a shape of a pipe. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that, prior to Trent West, General Carbide had manufactured lots of tungsten carbide rings in various dimensions, using the same method as used in making the annular blanks for West's tungsten carbide rings. Also, McKinnon testified that the step of compressing the powdered material mixture at a pressure sufficient to form an annular blank was well known in the prior art (McKinnon deposition, p. 17 line 2 through p. 18 line 20; p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). The '333 patent teaches "such a metal can be brought to the

	desired form by taking the powder of the element, as in the case of tungsten, and molding it into the desired shape in a hydraulic press, after which it is heated in a neutral or reducing atmosphere to sinter" (Col. 1, lines 42-49). Iler teaches compressing the powdered material mixture at a pressure sufficient to form an annular blank (*e.g.*, col. 10, lines 7-10 and lines 40-50). Stanley testified that the powdered material mixture was compressed at a pressure sufficient to form an annular blank (p. 25 lines 7-13).
sintering the annular blank at a temperature sufficient to form the tungsten-carbide based annular jewelry article.	Raghunathan et al., p. 21, teaches sintering tungsten carbide articles: "Most cemented carbides are manufactured by powder metallurgy process consisting of WC powder production, powder consolidation, sintering and post-sinter forming." Nippon Tungsten teaches that the powdered mixture is compression molded under 1.5 ton/cm^2, then presintered at 800 °C, and sintered at 1350 °C. (English translation of Abstract). Lederrey states that the "mixture is then submitted to a preliminary sintering so as to form a solid block which can however still be machined easily for instance by means of a diamond tool. Pieces having a shape similar to that of the workpieces which are to be manufactured are then cut from said block and introduced into a furnace to carry out the final sintering thereof." (col. 1, line 70 – col. 2, line 7; col. 3, lines 17-29). West has admitted that the compositions/formula of tungsten carbide material, the method of making tungsten carbide blanks, and sintering the blanks, used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape including a shape of a pipe. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21;

	p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the step of sintering the annular blank at a temperature sufficient to form the tungsten-carbide based ring was well known in the prior art (McKinnon deposition, p. 17 line 2 through p. 18 line 20; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 153 line 24 through p. 154 line 9). The '333 patent teaches "such a metal can be brought to the desired form by taking the powder of the element, as in the case of tungsten, and molding it into the desired shape in a hydraulic press, after which it is heated in a neutral or reducing atmosphere to sinter." (Col. 1, lines 42-49). Iler teaches sintering the annular blank at a temperature sufficient to form the annular jewelry article (col. 5, lines 49-51; col. 10, lines 37-46; col. 6, lines 3-17). Stanley testified that the annular blank was sintered at a temperature sufficient to form the tungsten-carbide based annular jewelry article (p. 25 line 22 through p. 26 line 4).
Claim 18	
The method of claim 16 wherein the mixture includes at least 81 weight percent tungsten carbide.	Fujimora teaches providing a mixture of two or more powdered materials which consist essentially of 82 weight percent tungsten carbide. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Nippon Tungsten teaches that the powdered mixture includes 82 weight percent tungsten carbide. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics, and is suitable for jewelry articles. (English translation of Abstract; table 1 on page 254).

	Lederrey states that the "hardness of the material obtained by sintering a tungsten carbide powder is about 9 in the Moh's scale." (col. 5, lines 33-34). West has admitted that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring were known in the prior art and were not invented by him. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon. (McKinnon deposition, p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 153 line 24 through p. 154 line 9). Iler teaches providing a mixture of two or more powered materials which includes at least 81 weight percent tungsten carbide (col. 2, lines 24-27). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26). Stanley testified that the mixture included 85 weight percent or more tungsten carbide (p. 52 lines 17-22).
Claim 29	
The method of claim 16, wherein the annular article is provided with at least one depression comprising a groove, slot, or hole formed in an outer surface thereof.	Oganesyan teaches providing a finger ring with a groove formed in the outer surface of the ring in which there is hole. (col. 1, lines 56-66; Figs. 2, 3A, 8, and 9). Hawke teaches methods for forming finger rings having inserts/inlays of a precious metal. Hawke teaches that a finger ring is provided with a recessed middle portion formed in an outer surface of the ring. (pp. 1-2; Figs. 1 and 3). Brogan teaches a method of forming a groove in a ring by machining in order to hold gems, form facets, or hold precious

	metals. (col. 1, lines 13-17 and 34-40; Figs. 3-6). Bager teaches that the finger ring is provided with an annular groove formed in an outer surface. (col. 1, lines 15-17). Lederrey teaches a half cylindrical recess, an annular central hole, blind holes, and two recesses, formed in an outer surface of the jewelry article. (col. 3, lines 3-5, 43-45; col. 5, lines 8-13; Figs. 1-4 and 7). Rein teaches providing a finger ring with a recess on its outer surface within which precious stones, plastics, ceramics, glass, amber, or other material can be inserted. (col. 1, lines 32-36; col. 10, lines 33-35; col. 11, lines 53-59; Figs. 5, 12-15). West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that it would have been obvious to provide the annular article with a depression comprising a groove, slot, or hole formed in an outer surface (p. 163 line 22 through p. 164 line 3). Iler teaches that the annular article has at least one depression comprising a groove, slot, or hole formed in an outer surface so that it is used as a mount for stones, gems, minerals, or any other decoration (col. 5, lines 60-61; col. 5, line 70 through col. 6, line 2; col. 10, lines 10-12). Also, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that any desired shape could be formed (p. 26 lines 1-4).

Claim 33	
The method of claim 16, further comprising the step of finish polishing at least one outer surface of the annular article.	Fujimora teaches polishing to a mirror finish a jewelry article made of tungsten carbide. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Nippon Tungsten teaches that the powdered mixture is compression molded, sintered, and ground using diamond. (English translation of Abstract). Maruyama teaches that the hard alloy has polishing brightness characteristics. (English translation of Abstract). Bager teaches finishing the surfaces of the annular blank according to taste. (col. 1, lines 12-15). Lederrey teaches that at least one outer surface of the jewelry article is polished. (col. 2, lines 55-60; col. 3, lines 37-39; col. 5, lines 18-21). West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. The watch and watch bracelet made by Rado has a polished surface. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art (West deposition, p. 45 line 16 – p. 46 line 21; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24). McKinnon testified that the step of finish polishing an outer surface of the annular article was well known in the prior art (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches the step of finish polishing at least one outer surface of the annular article (col. 8, lines 17-32 and lines 58-59; col. 10, lines 60-66; col. 11, lines 35-37 and lines 53-59). Also, Iler states that "[m]ethods for fabricating such item of

	jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that the method further comprised the step of finish polishing at least one outer surface of the annular article (p. 28 line 23 through p. 29 line 1; p. 31 lines 18-21; p.32 line 20 through p. 33 line 9).
Claim 34	
The method of claim 16, further comprising a step of modifying the outer surface to provide a non-polished portion thereof.	Lampert teaches providing a metal jewelry article with a plurality of faceted reflective surfaces, wherein the faceted reflective surfaces are angled and positioned so as to reflect light in a manner which simulates a diamond, and, accordingly, the artificial diamond baguettes do not require polishing. (Abstract; Fig. 1). Bager teaches finishing the surfaces of the annular blank according to taste. (col. 1, lines 12-15). McKinnon testified that a step of modifying the outer surface to provide any desired surface profile was well known in the art (p. 25 line 19 through p. 26 line 10). Iler teaches a step of modifying the outer surface to provide a desired surface profile including a non-polished portion (col. 8, lines 28-32). Also, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that a portion of the outer surface was non-polished (p. 31 lines 18-21).
Claim 35	
The method of claim 16, wherein the annular article has at least one flat or curved facet formed in an outer surface thereof.	Oganesyan teaches providing the ring with at least one flat or curved facet formed in the outer surface of the ring. (Figs. 2, 3A, 8, and 9). Hawke teaches providing an annular article having at least one flat or curved facet formed in an outer surface thereof. (Figs. 1 and 3). Brogan teaches that the ring has at least one flat or curved facet formed in an outer surface. (col. 1, lines 13-17 and 34-40; Figs. 3-6).

	Lampert teaches providing a metal jewelry article with a plurality of faceted reflective surfaces (Abstract; Fig. 1). Bager teaches that the finger ring has at least one flat or curved facet formed in an outer surface. (Fig. 4). Lederrey teaches that the jewelry article has at least one flat or conical facet formed in an outer surface. (col. 2, lines 54-60; col. 5, lines 15-16; Figs. 1, 2, 4, and 7). Rein teaches a finger ring having both curved and flat surfaces. (col. 7, lines 17-33). West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that providing the annular article with any desired surface profile or shape was well known in the art (p. 25 line 19 through p. 26 line 21; p. 163 line 22 through p. 164 line 3). Iler teaches that the annular article has at least one flat or curved facet formed in an outer surface so that it is used as a mount for stones, gems, minerals, or any other decoration (col. 5, lines 60-61; col. 5, line 70 through col. 6, line 2; col. 10, lines 10-12). Also, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that the annular article has at least one flat or curved facet formed in an outer surface (p. 33 lines 2-6).

'736 patent

Claim Language	Prior art
Claim 1	
A method of making a jewelry article which comprises: providing an annular substrate formed of a hard material predominantly comprising tungsten carbide and	Raghunathan et al., p. 21, Fig. 1 shows ring-shaped parts made of tungsten carbide. Further, Raghunathan et al., p. 23 teaches using "WC aluminide composites (81% WC max)." Fujimora teaches a method of providing a jewelry article made of a hard material predominantly comprising tungsten carbide that is ground and polished to a mirror finish. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Flanagan states, "if the ring shape is to be used for jewelry, e.g., a watch case". (col. 3, lines 38-40). Nippon Tungsten teaches a method of providing watch cases, necklaces, or other ornamental parts made of a hard alloy containing 82 weight percent tungsten carbide. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics, and is suitable for jewelry articles. (English translation of Abstract; table 1 on page 254). Bager teaches a finger ring with rigidity of structure. (col. 1, lines 1-15). Lederrey teaches a method of providing a tungsten-carbide based jewelry article (watch case) having an annular portion. (col. 1, lines 9-42; col. 1, line 65 – col. 2, line 8; col. 2, lines 25-29, 49-51, 55-60, and 67-69; col. 3, lines 3-6, 17-28, 37-40; col. 3, line 70 – col. 4, line 2; col. 5, lines 4-26, 33-57, and 63-67; Figs. 1 and 7). Rein teaches a finger ring (such as a wedding ring) made of tungsten carbide. Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-14).

	West has admitted that the compositions/formula of tungsten carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape including a shape of a pipe. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon, and a tungsten-carbide based ring that is the size of a wedding band would have been easily made of it. Further, McKinnon testified that, prior to Trent West, General Carbide had manufactured lots of tungsten carbide rings in various dimensions, using the same method as used in making the annular blanks for West's tungsten carbide rings. (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches a method of making annular jewelry articles which comprises providing an annular substrate formed of a hard material predominantly comprising tungsten carbide (col. 2, lines 24-27; col. 5, line 74 through col. 6, line 8; col. 9, lines 56-58; col. 10, lines 9-10; col. 8, lines 67-70; col. 1, lines 48-55; col. 6, lines 25-28 and lines 41-45). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26), and states that "[i]tems of jewelry are so well known and the size, shapes, combinations

	of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry" (col. 5, lines 64-67). Also, Iler acknowledges scratch resistant watch cases of cobalt-bonded tungsten carbide compositions as prior art (col. 7, lines 46-48). Stanley testified that in or around 1991 he made a tungsten-carbide based annular jewelry ring, which was worn as a finger ring by Stanley for a period of approximately six months: the method of making the ring comprised providing an annular substrate formed of a hard material predominantly comprising tungsten carbide (Stanley deposition, p. 18 line 6 through p. 23 line 12; p. 24 line 7 through p. 37 line 5; p. 45 line 10 through p. 46 line 24; p. 48 line 21 through p. 50 line 7; Exhs. A and B; p. 52 lines 14-22).
having an outer surface with an outer diameter and a depression disposed circumferentially in its outer surface;	The '259 patent teaches depressions "blind holes" formed in the surface of the ring. (Figs 1-5, Col. 2, lines 42-45.) Oganesyan teaches providing a finger ring with a groove formed at least partially around the circumference of the ring. (col. 1, lines 56-66; Figs. 2, 3A, 8, and 9). Hawke teaches methods for forming finger rings having inserts/inlays of a precious metal. Hawke teaches providing a finger ring with a recessed middle portion circumferentially formed in an outer surface of the ring. (pp. 1-2; Figs. 1 and 3). Brogan teaches a method of forming a groove disposed circumferentially in a ring by machining in order to hold gems, form facets, or hold precious metals. (col. 1, lines 13-17 and 34-40; Figs. 3-6). Bager teaches a depression disposed circumferentially in the outer surface of the finger ring. (col. 1, lines 15-17; Fig. 4). Lederrey teaches a half cylindrical recess, an annular central hole, blind holes, and two recesses, formed in an outer surface of the jewelry article. (col. 3, lines 3-5, 43-45; col. 5, lines 8-13; Figs. 1-4 and 7). Rein teaches providing a finger ring with a recess on its outer surface within which precious stones, plastics, ceramics, glass, amber, or other material can be inserted. (col. 1, lines 32-36; col. 10, lines 33-35; col. 11, lines 53-59; Figs. 5, 12-15). West has admitted that, prior to his conception of a tungsten

	carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that providing the annular substrate with any desired surface profile or shape was well known in the prior art (p. 35 line 13 through p. 36 line 6; p. 163 line 22 through p. 164 line 3). Iler teaches that the annular article has a depression disposed circumferentially in its outer surface so as to be used as a mount for stones, gems, minerals, or any other decoration (col. 5, lines 60-61; col. 5, line 70 through col. 6, line 2; col. 10, lines 10-12). Also, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that any desired shape could be formed (p. 26 lines 1-4; p. 29 lines 2-11).
providing a metal band having an inner diameter that is greater than the outer diameter of the annular substrate; and	Hawke teaches providing an insert of previous metal band within the recessed middle portion. (pp. 1-2; Figs. 1 and 3). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Figs. 6, 8, and 9). Lederrey teaches providing a metal ring preferably made of stainless steel, which is to be set with force fit into the outer protecting and ornamental body made of tungsten carbide. The inner diameter of the metal ring is greater than the outer diameter of the annular portion of the outer tungsten carbide body. (col. 3, lines 54-57; col. 3, line 75 – col. 4, line 2; Fig. 2).

	Rein teaches that a variety of metallic decorative constructions are possible. (col. 7, lines 17-32). West has admitted that joining two different metals together was well known in the prior art. (p. 110 line 12 – p. 114 line p. 13; p. 118 lines 9-13). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry…The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal…" (col. 5, lines 64-72). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21).
inwardly deforming the metal band to squeeze it into the depression in the outer surface of the annular substrate so as to form the jewelry article,	The '259 patent teaches that inlays are "inserted therein and brazed or soldered" (col. 2, lines 63-66). Hawke teaches that the insert is slipped into position so that it encircles the recessed middle portion of the finger ring, and further teaches that the insert will be a tight fit on the recessed middle portion. (pp. 2-3; Figs. 1 and 3). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Figs. 6, 8, and 9). Lederrey teaches that the metal ring is set with force fit into the outer protecting and ornamental body made of tungsten carbide. (col. 3, lines 54-57; col. 3, line 75 – col. 4, line 2; Fig. 2). Rein teaches that a variety of metallic decorative constructions are possible. (col. 7, lines 17-32). West has admitted that joining two different metals together was well known in the prior art. West has testified that what is unique and new about his method of inlaying another metal into a tungsten carbide is melting the metal in the tungsten carbide

	substrate in a vacuum. Such element, however, is not required in this claim. (p. 110 line 12 – p. 115 line p. 4; p. 118 lines 9-13). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry….The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal….Combinations can be made for example by brazing, soldering, gluing, cementing, insetting, pegging, and sewing…" (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21).
wherein the hard material is sufficiently hard to avoid being deformed during the inward deforming of the metal band.	Fujimora teaches that the hard material has hardness in excess of Hv 1,000 and is essentially mar-proof. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Lederrey states, "[t]he hardness of the material obtained by sintering a tungsten carbide powder is about 9 in the Moh's scale. Said material is thus harder than topaz, which is about 8 in the Moh's scale….A piece made of sintered tungsten carbide will therefore not be scratched by the usual materials….The improved watch case according to the invention has thus the advantage to keep its original appearance during a period which is practically non-limited, even if it is carried under the most extensive conditions. Its polished outer surfaces will always show the same brightness and it will never be damaged by scratches." (col. 5, lines 33-49). Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-14). West has admitted that the compositions/formula of tungsten carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57

	lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches that the hard material is characterized by its outstanding toughness and hardness, high mechanical strength, density, etc. (col. 6, lines 25-28; col. 1, lines 51-54). Also, the annular substrate formed of the hard material in Iler does not break or chip when it is allowed to freely fall on a hardwood floor from a height of seven feet (col. 6, lines 41-45). Stanley ring is inherently hard because it was made of 85 weight percent or more tungsten carbide (*see also*, p. 71 lines 6-7).
Claim 10	
The method of claim 1, wherein the hard material is formed by sintering powders that consist essentially of tungsten carbide and a metal binder material.	Fujimora teaches a method of providing a jewelry article made of a hard material consisting essentially of tungsten carbide and a metal binder material. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Nippon Tungsten teaches that the hard alloy is formed by sintering powders consisting essentially of tungsten carbide and a metal binder material. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a metal binder material is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. (English translation of Abstract; table 1 on page 254). Lederrey teaches providing a mixture of a powder of tungsten carbide and a powder of a bonding metal. (col. 1, lines 65-

	69). Lederrey states that the "mixture is then submitted to a preliminary sintering so as to form a solid block which can however still be machined easily for instance by means of a diamond tool. Pieces having a shape similar to that of the workpieces which are to be manufactured are then cut from said block and introduced into a furnace to carry out the final sintering thereof." (col. 1, line 70 – col. 2, line 7; col. 3, lines 17-29). West has admitted that the compositions/formula of tungsten carbide material, the method of making tungsten carbide blanks, and sintering process, used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the method of forming the hard material by sintering powders that consist essentially of tungsten carbide and a metal binder material was well known in the prior art (McKinnon deposition, p. 17 line 2 through p. 18 line 20; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 153 line 24 through p. 154 line 9). Iler teaches that the hard material is formed by sintering powders that contain 70 volume percent of tungsten carbide and a metal binder material (col. 2, lines 24-32; col. 5, lines 49-51; col. 10, lines 37-46). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26). Stanley testified that the hard material was formed by sintering powders that consisted essentially of tungsten carbide and a metal binder material (p. 32 lines 7-12; p. 33 lines 16-18; p. 52 lines 14-22; p. 25 line 22 through p. 26 line 4).

Claim 24	
A method of making a jewelry article which comprises: providing an annular substrate formed of a hard material comprising tungsten carbide and	Raghunathan et al., p. 21, Fig. 1 shows ring-shaped parts made of tungsten carbide. Fujimora teaches a method of providing a jewelry article made of a hard material comprising tungsten carbide that is ground and polished to a mirror finish. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Flanagan states, "if the ring shape is to be used for jewelry, e.g., a watch case". (col. 3, lines 38-40). Nippon Tungsten teaches a method of providing watch cases, necklaces, or other ornamental parts made of a hard alloy containing 82 weight percent tungsten carbide. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics, and is suitable for jewelry articles. (English translation of Abstract; table 1 on page 254). Bager teaches a finger ring with rigidity of structure. (col.1, lines 1-9). Lederrey teaches a method of providing a tungsten-carbide based jewelry article (watch case) having an annular portion. (col. 1, lines 9-42; col. 1, line 65 – col. 2, line 8; col. 2, lines 25-29, 49-51, 55-60, and 67-69; col. 3, lines 3-6, 17-28, 37-40; col. 3, line 70 – col. 4, line 2; col. 5, lines 4-26, 33-57, and 63-67; Figs. 1 and 7). Rein teaches a finger ring (such as a wedding ring) made of tungsten carbide. Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-14). West has admitted that the compositions/formula of tungsten

	carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape including a shape of a pipe. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon, and a tungsten-carbide based ring that is the size of a wedding band would have been easily made of it. Further, McKinnon testified that, prior to Trent West, General Carbide had manufactured lots of tungsten carbide rings in various dimensions, using the same method as used in making the annular blanks for West's tungsten carbide rings. (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches a method of making annular jewelry articles which comprises providing an annular substrate formed of a hard material comprising tungsten carbide (col. 2, lines 24-27; col. 5, line 74 through col. 6, line 8; col. 9, lines 56-58; col. 10, lines 9-10; col. 8, lines 67-70; col. 1, lines 48-55; col. 6, lines 25-28 and lines 41-45). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26), and states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of

	jewelry" (col. 5, lines 64-67). Also, Iler acknowledges scratch resistant watch cases of cobalt-bonded tungsten carbide compositions as prior art (col. 7, lines 46-48). Stanley testified that in or around 1991 he made a tungsten-carbide based annular jewelry ring, which was worn as a finger ring by Stanley for a period of approximately six months: the method of making the ring comprised providing an annular substrate formed of a hard material comprising tungsten carbide (Stanley deposition, p. 18 line 6 through p. 23 line 12; p. 24 line 7 through p. 37 line 5; p. 45 line 10 through p. 46 line 24; p. 48 line 21 through p. 50 line 7; Exhs. A and B; p. 52 lines 14-22).
having an outer surface with an outer diameter and a depression which comprises one or more apertures in the annular band and which depression is disposed circumferentially in its outer surface;	The '259 patent teaches depressions "blind holes" formed in the surface of the ring. (*see* Figs 1-5, Col. 2, lines 42-45). Oganesyan teaches providing a finger ring with a groove formed in the outer surface of the ring in which there is a hole. (col. 1, lines 56-66; Figs. 2, 3A, 8, and 9). Hawke teaches methods for forming finger rings having inserts/inlays of a precious metal. Hawke teaches providing a finger ring with a recessed middle portion circumferentially formed in an outer surface of the ring. (pp. 1-2; Figs. 1 and 3). Brogan teaches a method of forming a groove disposed circumferentially in a ring by machining in order to hold gems, form facets, or hold precious metals. (col. 1, lines 13-17 and 34-40; Figs. 3-6). Bager teaches that the finger ring is provided with an annular groove disposed circumferentially in its outer surface. (col. 1, lines 15-17; Fig. 4). Lederrey teaches a half cylindrical recess, an annular central hole, blind holes, and two recesses, formed in an outer surface of the jewelry article. (col. 3, lines 3-5, 43-45; col. 5, lines 8-13; Figs. 1-4 and 7). Rein teaches providing a finger ring with a recess on its outer surface within which precious stones, plastics, ceramics, glass, amber, or other material can be inserted. (col. 1, lines 32-36; col. 10, lines 33-35; col. 11, lines 53-59; Figs. 5, 12-15). West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing

	tungsten carbide blanks of any desired shape. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that providing the annular band with any desired surface profile or shape was well known in the prior art (p. 35 line 13 through p. 36 line 6; p. 163 line 22 through p. 164 line 3). Iler teaches that the annular article has a depression which comprises one or more apertures in the annular band and which is disposed circumferentially in its outer surface so as to be used as a mount for stones, gems, minerals, or any other decoration (col. 5, lines 60-61; col. 5, line 70 through col. 6, line 2; col. 10, lines 10-12). Also, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that any desired shape could be formed (p. 26 lines 1-4; p. 29 lines 2-11).
providing a metal band having an inner diameter that is greater than the outer diameter of the annular substrate; and	Hawke teaches providing an insert of previous metal band within the recessed middle portion. (pp. 1-2; Figs. 1 and 3). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24). Lederrey teaches providing a metal ring preferably made of stainless steel, which is to be set with force fit into the outer protecting and ornamental body made of tungsten carbide. The inner diameter of the metal ring is greater than the outer diameter of the annular portion of the outer tungsten carbide body. (col. 3, lines 54-57; col. 3, line 75 – col. 4, line 2; Fig. 2).

	Rein teaches that a variety of metallic decorative constructions are possible. (col. 7, lines 17-32). West has admitted that joining two different metals together was well known in the prior art. (p. 110 line 12 – p. 114 line p. 13; p. 118 lines 9-13). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry…The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal…" (col. 5, lines 64-72). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21).
inwardly deforming the metal band to squeeze it into the depression in the outer surface of the annular substrate so as to form the jewelry article.	The '259 patent teaches that inlays are "inserted therein and brazed or soldered". Col. 2, lines 63-66. Hawke teaches that the insert is slipped into position so that it encircles the recessed middle portion of the finger ring, and further teaches that the insert will be a tight fit on the recessed middle portion. (pp. 2-3; Figs. 1 and 3). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Figs. 6, 8, and 9). Lederrey teaches that the metal ring is set with force fit into the outer protecting and ornamental body made of tungsten carbide. (col. 3, lines 54-57; col. 3, line 75 – col. 4, line 2; Fig. 2). Rein teaches that a variety of metallic decorative constructions are possible. (col. 7, lines 17-32). West has admitted that joining two different metals together was well known in the prior art. West has testified that what is unique and new about his method of inlaying another metal into a tungsten carbide is melting the metal in the tungsten

	carbide substrate in a vacuum. Such element, however, is not required in this claim. (p. 110 line 12 – p. 115 line p. 4; p. 118 lines 9-13). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry….The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal….Combinations can be made for example by brazing, soldering, gluing, cementing, insetting, pegging, and sewing…" (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21).

'314 patent

Claim Language	**Prior art**
Claim 1	
A method of making a jewelry ring which comprises: providing an annular finger ring made of a hard material consisting essentially of tungsten carbide,	Raghunathan et al., p. 21, Fig. 1 shows ring-shaped parts made of tungsten carbide. These parts existed at least in April of 1996. Fujimora teaches a method of providing a jewelry article made of a hard material consisting essentially of tungsten carbide that is ground and polished to a mirror finish. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Flanagan states, "if the ring shape is to be used for jewelry, e.g., a watch case". (col. 3, lines 38-40). Nippon Tungsten teaches a method of providing watch cases, necklaces, or other ornamental parts made of a hard alloy containing 82 weight percent tungsten carbide and metal binder materials. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains

	tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics, and is suitable for jewelry articles. (English translation of Abstract; table 1 on page 254). Bager teaches making a finger ring with rigidity of structure. (col. 1, lines 1-9). Lederrey teaches a method of providing a tungsten-carbide based jewelry article (watch case) having an annular portion. (col. 1, lines 9-42; col. 1, line 65 – col. 2, line 8; col. 2, lines 25-29, 49-51, 55-60, and 67-69; col. 3, lines 3-6, 17-28, 37-40; col. 3, line 70 – col. 4, line 2; col. 5, lines 4-26, 33-57, and 63-67; Figs. 1 and 7). Rein teaches a finger ring (such as a wedding ring) made of tungsten carbide. Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-14). West has admitted that the compositions/formula of tungsten carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape including a shape of a pipe. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon, and a tungsten-carbide based ring that is the size of a wedding band would have been easily made of it.

	Further, McKinnon testified that, prior to Trent West, General Carbide had manufactured lots of tungsten carbide rings in various dimensions, using the same method as used in making the annular blanks for West's tungsten carbide rings. (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches a method of making annular jewelry rings which comprises providing an annular ring made of a hard material containing 70 volume percent of tungsten carbide (col. 2, lines 24-27; col. 5, line 74 through col. 6, line 8; col. 9, lines 56-58; col. 10, lines 9-10; col. 8, lines 67-70; col. 1, lines 48-55; col. 6, lines 25-28 and lines 41-45). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26), and states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry" (col. 5, lines 64-67). Also, Iler acknowledges scratch resistant watch cases of cobalt-bonded tungsten carbide compositions as prior art (col. 7, lines 46-48). Stanley testified that in or around 1991 he made a tungsten-carbide based annular jewelry ring, which was worn as a finger ring by Stanley for a period of approximately six months: the method of making the ring comprised providing an annular finger ring made of a hard material consisting essentially of tungsten carbide (Stanley deposition, p. 18 line 6 through p. 23 line 12; p. 24 line 7 through p. 37 line 5; p. 45 line 10 through p. 46 line 24; p. 48 line 21 through p. 50 line 7; Exhs. A and B; p. 52 lines 14-22).
with the annular ring having at least one external facet and defining an aperture configured and dimensioned to receive a person's finger; and	The '885, '040, '692 and '743 patents each teach jewelry rings with facets. Lampert teaches providing a metal jewelry ring with a plurality of faceted reflective surfaces. (Abstract; Fig. 1). Bager teaches that the finger ring has at least one external facet and an aperture configured and dimensioned to receive a

	person's finger. (Figs. 1 and 4). Lederrey teaches that the jewelry article has at least one flat or conical facet formed in an outer surface. (col. 2, lines 54-60; col. 5, lines 15-16; Figs. 1, 2, 4, and 7). Rein teaches a finger ring (such as a wedding ring) made of tungsten carbide. The finger ring has at least one external facet. (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-15). West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape in various dimensions. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that, prior to Trent West, General Carbide had manufactured lots of tungsten carbide rings in various dimensions, using the same method as used in making the annular blanks for West's tungsten carbide rings. Also, McKinnon testified that providing the annular ring with any desired surface profile or shape was well known in the prior art (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches that the annular ring has at least one external facet and defines an aperture configured and dimensioned to receive a person's finger (col. 5, line 60 through col. 6, line 8). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry…." (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for

	fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley ring had at least one external facet and an aperture configured and dimensioned to receive a person's finger (p. 33 lines 2-6; p. 29 lines 2-11).
grinding the at least one external facet to a predetermined shape to provide a pleasing appearance to the jewelry ring,	The '885, '040, '692 and '743 patents each teach jewelry rings with facets, each having a predetermined shape: '885 teaches triangular shape (Fig. 3); '040 teaches round shape (Fig. 1); '692 teaches rectangular shape (Fig. 3); '743 also teaches rectangular shape (Fig. 3). Fujimora teaches a method of providing a jewelry article made of a hard material comprising tungsten carbide that is ground and polished to a mirror finish. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Nippon Tungsten teaches that the powdered mixture is compression molded, sintered, and ground using diamond. (English translation of Abstract). Lampert teaches providing a metal jewelry ring with a plurality of faceted reflective surfaces, wherein the faceted reflective surfaces are angled and positioned so as to reflect light in a manner which simulates a diamond. (Abstract; Fig. 1). Maruyama teaches that the hard alloy has polishing brightness characteristics. (English translation of Abstract). Bager teaches finishing the surfaces of the annular blank according to taste. (col. 1, lines 14-15). Lederrey teaches that at least one external facet of the jewelry article is polished. (col. 2, lines 55-60; col. 3, lines 37-39; col. 5, lines 18-21). Rein teaches a finger ring having both curved and flat surfaces and having aesthetic appearance and shape. (col. 7, lines 17-33; col. 2, lines 25-26; Figs. 12-15). West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 58 lines

	18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24). McKinnon testified that the step of grinding to provide a desired surface profile or shape was well known in the prior art (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches grinding the at least one external facet to a predetermined shape to provide a desired appearance to the jewelry ring (col. 8, lines 17-32 and lines 58-60; col. 10, lines 60-66; col. 11, lines 35-37 and lines 53-59). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry…." (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that the method further comprised the step of finish polishing at least one outer surface of the annular article (p. 28 line 23 through p. 29 line 1; p. 31 lines 18-21; p.32 line 20 through p. 33 line 9).
with the hard material being long wearing and virtually indestructible during use of the jewelry ring.	Fujimora teaches that the hard material has hardness in excess of Hv 1,000 and is essentially mar-proof. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Nippon Tungsten teaches that the sintered alloy has a hardness of 1290 Hv. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics, and is suitable for jewelry articles. (English translation of Abstract;

	table 1 on page 254). Lederrey states, "[t]he hardness of the material obtained by sintering a tungsten carbide powder is about 9 in the Moh's scale. Said material is thus harder than topaz, which is about 8 in the Moh's scale….A piece made of sintered tungsten carbide will therefore not be scratched by the usual materials….The improved watch case according to the invention has thus the advantage to keep its original appearance during a period which is practically non-limited, even if it is carried under the most extensive conditions. Its polished outer surfaces will always show the same brightness and it will never be damaged by scratches." (col. 5, lines 33-49). Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26). West has admitted that the compositions/formula of tungsten carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches that the hard material is long wearing and virtually indestructible during use of the jewelry ring (col. 6, lines 25-28 and lines 41-45; col. 1, lines 49-58).

	Stanley ring is inherently hard enough to be long wearing and virtually indestructible during use of the ring because it was made of 85 weight percent or more tungsten carbide (*see also*, p. 71 lines 6-7).
Claim 10	
The method of claim 1, which further comprises providing a cavity in the annular ring, the cavity having a predetermined size and shape that is configured to receive an insert of a decoration component that provides a substantially different visual effect to the jewelry ring.	Oganesyan teaches providing a finger ring with a groove formed in the outer surface of the ring in which there is a hole to receive a gem. (col. 1, lines 56-66; Figs. 2, 3A, 8, and 9). Hawke teaches methods for forming finger rings having inserts/inlays of a precious metal that provides a substantially different visual effect to the finger ring. Hawke teaches providing a finger ring with a recessed middle portion circumferentially formed in an outer surface of the ring. (pp. 1-2; Figs. 1 and 3). Brogan teaches a method of forming a groove in a ring by machining in order to hold gems, form facets, or hold precious metals. (col. 1, lines 13-17 and 34-40; Figs. 3-6). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Figs. 6, 8, and 9). Lederrey teaches a half cylindrical recess, an annular central hole, blind holes, and two recesses, formed in an outer surface of the jewelry article. They are configured to receive components such as a winding and hand setting member, a watch movement, a bar, and a wrist band. (col. 3, lines 3-5, 43-45; col. 5, lines 8-13; Figs. 1-4 and 7). Rein teaches providing a finger ring with a recess on its outer surface within which precious stones, plastics, ceramics, glass, amber, or other material can be inserted. (col. 1, lines 32-36; col. 10, lines 33-35; col. 11, lines 53-59; Figs. 5, 12-15). West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape in various

	dimensions. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that providing the annular band with any desired surface profile or shape was well known in the prior art (p. 35 line 13 through p. 36 line 6; p. 163 line 22 through p. 164 line 3). Iler teaches providing a cavity in the annular ring, the cavity having a predetermined size and shape that is configured to receive an insert of a decoration component that provides a substantially different visual effect to the jewelry ring (col. 5, lines 60-61; col. 5, line 70 through col. 6, line 2; col. 10, lines 10-12). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry…." (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that any desired shape could be formed (p. 26 lines 1-4; p. 29 lines 2-11).
Claim 14	
The method of claim 10, which further comprises providing an insert of a visually different hard material, a precious metal or a gemstone in the cavity that extends into the annular ring, wherein the annular ring is integrally formed as a hardened substructure and the insert is provided in the cavity thereof.	Oganesyan teaches providing a finger ring with a groove formed in the outer surface of the ring in which there is a hole to receive a gem. (col. 1, lines 56-66; Figs. 2, 3A, 8, and 9). Hawke teaches methods for forming finger rings having inserts/inlays of a precious metal that provides a substantially different visual effect to the finger ring. Hawke teaches providing the insert within a recessed middle portion circumferentially formed in an outer surface of the ring. (pp. 1-2; Figs. 1 and 3). Brogan teaches a method of forming a groove in a ring by

	machining in order to hold gems, form facets, or hold precious metals. (col. 1, lines 13-17 and 34-40; Figs. 3-6). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Figs. 6, 8, and 9). Lederrey teaches a half cylindrical recess, an annular central hole, blind holes, and two recesses, formed in an outer surface of the jewelry article. They are configured to receive components such as a winding and hand setting member, a watch movement, a bar, and a wrist band. Further, Lederrey teaches that a metal ring preferably made of stainless steel is set with force fit into the outer protecting and ornamental body made of tungsten carbide. (col. 3, lines 3-5, 43-45, 54-57; col. 3, line 75 – col. 4, line 2; col. 5, lines 8-13; Figs. 1-4 and 7). Rein teaches providing an annular ring integrally formed as a hardened substructure with a recess on its outer surface within which precious stones, plastics, ceramics, glass, amber, or other material can be inserted. (col. 1, lines 32-36; col. 7, lines 36-40; col. 10, lines 33-35; col. 11, lines 53-59; Figs. 5, 12-15). West has admitted that joining two different metals together was well known in the prior art. West has testified that what is unique and new about his method of inlaying another metal into a tungsten carbide is melting the metal in the tungsten carbide substrate in a vacuum. Such element, however, is not required in this claim. West has admitted that the compositions/formula of tungsten carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8; p. 110 line 12 – p. 115 line p. 4; p. 118 lines 9-13). McKinnon testified that joining a tungsten carbide material

	and other metal together was well known in the prior art (p. 20 line 19 through p. 23 line 13). Iler teaches providing an insert of a visually different hard material, a precious metal or a gemstone in the cavity that extends into the annular ring, wherein the annular ring is integrally formed as a hardened substructure and the insert is provided in the cavity (col. 5, line 60 through col. 6, line 21).
Claim 19	
The method of claim 1, wherein the hard material is formed by sintering powders that consist essentially of at least tungsten carbide and a metal binder material.	Fujimora teaches a method of providing a jewelry article made of a hard material consisting essentially of tungsten carbide and a metal binder material. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Nippon Tungsten teaches that the hard material is formed by sintering powders that consist essentially of tungsten carbide and a metal binder material. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. (English translation of Abstract; table 1 on page 254). Lederrey teaches providing a mixture of a powder of tungsten carbide and a powder of a bonding metal. (col. 1, lines 65-69). Lederrey states that the "mixture is then submitted to a preliminary sintering so as to form a solid block which can however still be machined easily for instance by means of a diamond tool. Pieces having a shape similar to that of the workpieces which are to be manufactured are then cut from said block and introduced into a furnace to carry out the final sintering thereof." (col. 1, line 70 – col. 2, line 7; col. 3, lines 17-29). West has admitted that the compositions/formula of tungsten carbide material, the method of making tungsten carbide blanks, and sintering process, used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90

	lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the method of forming the hard material by sintering powders that consist essentially of tungsten carbide and a metal binder material was well known in the prior art (McKinnon deposition, p. 17 line 2 through p. 18 line 20; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 153 line 24 through p. 154 line 9). Iler teaches that the hard material is formed by sintering powders that contain 70 volume percent of tungsten carbide and a metal binder material (col. 2, lines 24-32; col. 5, lines 49-51; col. 10, lines 37-46). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26). Stanley testified that the hard material was formed by sintering powders that consisted essentially of tungsten carbide and a metal binder material (p. 32 lines 7-12; p. 33 lines 16-18; p. 52 lines 14-22; p. 25 line 22 through p. 26 line 4).

‘972 patent

Claim Language	**Prior art**
Claim 1	
A finger ring comprising: an annular body made of a sintered hard material comprising a predominantly tungsten carbide material, wherein	Raghunathan et al., p. 21, Fig. 1 shows ring-shaped parts made of tungsten carbide. Raghunathan et al., p. 21 teaches sintering tungsten carbide articles: “Most cemented carbides are manufactured by powder metallurgy process consisting of WC powder production, powder consolidation, sintering and post-sinter forming.” Fujimora teaches providing a jewelry article made of a hard material comprising predominantly tungsten carbide that is

	ground and polished to a mirror finish. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Flanagan states, "if the ring shape is to be used for jewelry, e.g., a watch case". (col. 3, lines 38-40). Nippon Tungsten teaches a method of providing watch cases, necklaces, or other ornamental parts made of a sintered hard material containing 82 weight percent tungsten carbide. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics, and is suitable for jewelry articles. (English translation of Abstract; table 1 on page 254). Bager teaches a finger ring with rigidity of structure. (col. 1, lines 1-9). Lederrey teaches a tungsten-carbide based jewelry article (watch case) having an annular portion. Lederrey teaches providing a mixture of a powder of tungsten carbide and a powder of a bonding metal. (col. 1, lines 65-69). Lederrey states that the "mixture is then submitted to a preliminary sintering so as to form a solid block which can however still be machined easily for instance by means of a diamond tool. Pieces having a shape similar to that of the workpieces which are to be manufactured are then cut from said block and introduced into a furnace to carry out the final sintering thereof." (col. 1, lines 9-42; col. 1, line 65 – col. 2, line 8; col. 2, lines 25-29, 49-51, 55-60, and 67-69; col. 3, lines 3-6, 17-29, 37-40; col. 3, line 70 – col. 4, line 2; col. 5, lines 4-26, 33-57, and 63-67; Figs. 1 and 7). Rein teaches a finger ring (such as a wedding ring) made of tungsten carbide. Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-14).

	West has admitted that the compositions/formula of tungsten carbide material, the method of making tungsten carbide blanks, and sintering process, used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape including a shape of a pipe. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon, and a tungsten-carbide based ring that is the size of a wedding band would have been easily made of it. Further, McKinnon testified that, prior to Trent West, General Carbide had manufactured lots of tungsten carbide rings in various dimensions, using the same method as used in making the annular blanks for West's tungsten carbide rings. (McKinnon deposition, p. 17 line 20 through p. 18 line 20; p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches annular jewelry articles comprising an annular body made of a sintered hard material comprising a predominantly tungsten carbide material (col. 2, lines 24-27; col. 5, line 74 through col. 6, line 8; col. 9, lines 56-58; col. 10, lines 9-10; col. 8, lines 67-70; col. 1, lines 48-55; col. 6, lines 25-28 and lines 41-45; col. 5, lines 49-51; col. 10, lines 37-46). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26), and states that "[i]tems of jewelry are so well known

	and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry" (col. 5, lines 64-67). Also, Iler acknowledges scratch resistant watch cases of cobalt-bonded tungsten carbide compositions as prior art (col. 7, lines 46-48). Stanley ring is a finger ring comprising an annular body made of a sintered hard material comprising a predominantly tungsten carbide material (p. 32 lines 7-12; p. 33 lines 16-18; p. 52 lines 14-22; p. 25 line 22 through p. 26 line 4).
the annular body has at least two external surfaces that are continuous and of a width sufficient to provide each external surface	The '040, '692 and '743 patents each teach jewelry rings with facets. Hawke teaches an annular body having at least two external surfaces that are continuous and have a width. (Figs. 1 and 3). Brogan teaches that a ring has at least two external surfaces that are continuous and have a width. (Figs. 3-6). Lampert teaches providing a metal jewelry ring with a plurality of faceted reflective surfaces (Abstract; Fig. 1). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Fig. 4, 6, 8, and 9). Lederrey teaches a jewelry article having an annular portion and having at least two external surfaces that are continuous and of width sufficient to provide each external surface with a polished facet. (col. 2, lines 54-60; Figs. 1-4). Rein teaches a finger ring having both curved and flat surfaces and having aesthetic appearance and shape. (col. 7, lines 17-33; col. 2, lines 25-26; Figs. 12-15). West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape. Further, West

	has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that providing the annular band with any desired surface profile or shape was well known in the prior art (p. 35 line 13 through p. 36 line 6; p. 163 line 22 through p. 164 line 3). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry…." (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that any desired shape or surface could be formed (p. 26 lines 1-4; p. 29 lines 2-11; p. 33 lines 2-6).
with a facet having a polished grey mirror finish and	The '791 patent teaches making a silver jewelry article where the metal is "polish[ed] as bright as possible, preferably to a mirror finish." (Col. 1, lines 45-46). Fujimora teaches polishing to a mirror finish a jewelry article made of tungsten carbide. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics. (English translation of Abstract; table 1 on page 254). Lederrey teaches a polished facet of tungsten carbide. Lederrey states, "[t]he color of the material consisting of

	sintered tungsten carbide is darker than that of steel, thus giving the watch case according to the invention an original ornamental appearance." (col. 2, lines 54-60; col. 5, lines 53-57). West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. The watch and watch bracelet made by Rado has a polished surface. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art (West deposition, p. 45 line 16 – p. 46 line 21; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24). McKinnon testified that polishing a facet to provide a grey mirror finish was well known in the prior art (p.25 line 19 through p. 28 line 3). Iler teaches a facet having a polished mirror finish (col. 8, line 6, lines 17-32 and lines 58-59; col. 10, lines 60-66; col. 11, lines 35-37 and lines 53-59). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry…." (col. 5, line 64 through col. 6, line 1). Also, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley ring had a facet having a polished grey mirror finish (p. 28 line 23 through p. 29 line 1; p. 31 lines 18-21; p.32 line 20 through p. 33 line 9).
with the hard material being long wearing and virtually indestructible during normal use of the finger ring so that each facet retains its mirror finish,	Fujimora teaches that the hard material has hardness in excess of Hv 1,000 and is essentially mar-proof. (col. 1, lines 4-17, 20-27; col. 2, lines 22-45). Nippon Tungsten teaches that the sintered alloy has a hardness of 1290 Hv, deflective strength of 220-250 kg/mm^2, good corrosion resistance to synthetic sweat, exhibited no cracking after brazing with Inconel. (English translation of Abstract).

	Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. Maruyama teaches that the hard alloy has mechanical strength, corrosion resistance, and polishing brightness characteristics, and is suitable for jewelry articles. (English translation of Abstract; table 1 on page 254). Lederrey states, "[t]he hardness of the material obtained by sintering a tungsten carbide powder is about 9 in the Moh's scale. Said material is thus harder than topaz, which is about 8 in the Moh's scale….A piece made of sintered tungsten carbide will therefore not be scratched by the usual materials….The improved watch case according to the invention has thus the advantage to keep its original appearance during a period which is practically non-limited, even if it is carried under the most extensive conditions. Its polished outer surfaces will always show the same brightness and it will never be damaged by scratches." (col. 5, lines 33-49). Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-14). West has admitted that the compositions/formula of tungsten carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 35 line 13 through p. 36 line 6; p. 47

	line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler teaches that the hard material is long wearing and virtually indestructible during normal use of the jewelry ring (col. 6, lines 25-28 and lines 41-45; col. 1, lines 49-58). Stanley ring is inherently hard enough to be long wearing and virtually indestructible during normal use of the ring because it was made of 85 weight percent or more tungsten carbide (*see also*, p. 71 lines 6-7).
wherein each facet extends concentrically and continuously around the circumference of the ring without variations in its width, and	In the '040 patent (Fig. 1) and '692 patent (Fig. 3), the facet is concentric, continuous and without variation in width. Hawke teaches that each facet extends concentrically and continuously around the circumference of the finger ring without variations in its width. (Figs. 1 and 3). Brogan teaches that each facet extends concentrically and continuously around the circumference of the ring without variations in its width. (Figs. 3-6). Lederrey teaches that a facet extends concentrically and continuously around the circumference of the annular portion of the jewelry article without variations in its width. (col. 2, lines 54-60; Figs. 1-3). Rein teaches a finger ring having both curved and flat surfaces and having aesthetic appearance and shape. Rein teaches that a variety of metallic decorative constructions are possible. (col. 7, lines 17-33; col. 2, lines 25-26; Figs. 12-15). West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 –

	p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that providing the annular ring with any desired surface profile or shape was well known in the prior art (p. 35 line 13 through p. 36 line 6; p. 163 line 22 through p. 164 line 3). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry…." (col. 5, line 64 through col. 6, line 1). Also, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that any desired shape or surface could be formed (p. 26 lines 1-4; p. 29 lines 2-11; p. 33 lines 2-6).
wherein the body includes a cavity of a predetermined size and shape that is a continuous slot which extends entirely around the annular body and	The '259 patent (Figs. 1, 2) teaches cavities of a predetermined size and shape arranged in a row, albeit not as a continuous slot, around the ring. Hawke teaches forming finger rings having inserts/inlays of a precious metal that provides a substantially different visual effect to the finger ring. Hawke teaches providing a finger ring with a recessed middle portion circumferentially formed in an outer surface of the ring. (pp. 1-2; Figs. 1 and 3). Brogan teaches a method of forming a groove in a ring by machining in order to hold gems, form facets, or hold precious metals. (col. 1, lines 13-17 and 34-40; Figs. 3-6). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Fig. 4, 6, 8, and 9). Lederrey teaches a half cylindrical recess, an annular central

	hole, blind holes, and two recesses, formed in the jewelry article. They are configured to receive components such as a winding and hand setting member, a watch movement, a bar, and a wrist band. (col. 3, lines 3-5, 43-45; col. 5, lines 8-13; Figs. 1-4 and 7). Rein teaches providing a finger ring with a recess on its outer surface within which precious stones, plastics, ceramics, glass, amber, or other material can be inserted. (col. 1, lines 32-36; col. 7, lines 36-40; col. 10, lines 33-35; col. 11, lines 53-59; Figs. 5, 12-15). West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape in various dimensions. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that providing the annular body with any desired surface profile or shape was well known in the prior art (p. 35 line 13 through p. 36 line 6; p. 163 line 22 through p. 164 line 3). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry….The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal….Combinations can be made for example by brazing, soldering, gluing, cementing, insetting, pegging, and sewing…" (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that any desired shape or surface could be

	formed (p. 26 lines 1-4; p. 29 lines 2-11; p. 33 lines 2-6).
is configured to receive an insert of a decoration component that provides a substantially different visual effect to the ring, with the slot positioned between and adjacent to the facets, and	The '259 patent teaches decorations with a different visual effect, such as "sharp degree of color contrast." (Col. 2, line 7.) Hawke teaches forming finger rings having inserts/inlays of a precious metal that provides a substantially different visual effect to the finger ring. Hawke teaches providing the insert within a recessed middle portion circumferentially formed in an outer surface of the ring and positioned between and adjacent to the facets. (pp. 1-2; Figs. 1 and 3). Brogan teaches a method of forming a groove in a ring by machining in order to hold gems, form facets, or hold precious metals. (col. 1, lines 13-17 and 34-40; Figs. 3-6). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Fig. 4, 6, 8, and 9). Lederrey teaches a half cylindrical recess, an annular central hole, blind holes, and two recesses, formed in the jewelry article. They are configured to receive components such as a winding and hand setting member, a watch movement, a bar, and a wrist band. (col. 3, lines 3-5, 43-45; col. 5, lines 8-13; Figs. 1-4 and 7). Rein teaches providing a finger ring with a recess on its outer surface within which precious stones, plastics, ceramics, glass, amber, or other material can be inserted. (col. 1, lines 32-36; col. 7, lines 36-40; col. 10, lines 33-35; col. 11, lines 53-59; Figs. 5, 12-15). West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape in various dimensions. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57

	lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that providing the annular body with any desired surface profile or shape was well known in the prior art (p. 35 line 13 through p. 36 line 6; p. 163 line 22 through p. 164 line 3). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry….The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal….Combinations can be made for example by brazing, soldering, gluing, cementing, insetting, pegging, and sewing…" (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Stanley testified that any desired shape or surface could be formed (p. 26 lines 1-4; p. 29 lines 2-11; p. 33 lines 2-6).
the decoration component comprising a precious metal	The '259 patent teaches that "inserts may be of white green and/or red gold. Other noble metals could be used, e.g. platinum, silver, etc." (Col. 2, lines 53-56.) Hawke teaches forming finger rings having inserts/inlays of a precious metal. (pp. 1-2; Figs. 1 and 3). Brogan teaches a method of forming a groove in a ring by machining in order to hold gems, form facets, or hold precious metals. (col. 1, lines 13-17 and 34-40; Figs. 3-6). Rein teaches that a variety of metallic decorative constructions are possible. (col. 7, lines 17-33; col. 2, lines 25-26; Figs. 12-15). West has admitted that joining two different metals together was well known in the prior art. West has testified that what is unique and new about his method of inlaying another metal into a tungsten carbide is melting the metal in the

	tungsten carbide substrate in a vacuum. Such element, however, is not required in this claim. (p. 110 line 12 – p. 115 line p. 4; p. 118 lines 9-13). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry….The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal….Combinations can be made for example by brazing, soldering, gluing, cementing, insetting, pegging, and sewing…" (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21).
that is disposed in and fills the slot, which slot extends into the hard material, and	The '259 patent teaches inserts that necessarily fill the slots because they are of exactly the same shape as the slots. (Col. 2, lines 56-59.) Hawke teaches providing the insert within the recessed middle portion circumferentially formed in an outer surface of the ring. Hawke teaches that the insert will be a tight fit on the recessed middle portion. (pp. 1-3; Figs. 1 and 3). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Figs. 6, 8, and 9). Rein teaches providing a finger ring with a recess on its outer surface within which precious stones, plastics, ceramics, glass, amber, or other material can be inserted. Rein teaches that a variety of metallic decorative constructions are possible. (col. 1, lines 32-36; col. 7, lines 17-40; col. 10, lines 33-35; col. 11, lines 53-59; Figs. 5, 12-15). West has admitted that joining two different metals together was well known in the prior art. West has testified that what is unique and new about his method of inlaying another

	metal into a tungsten carbide is melting the metal in the tungsten carbide substrate in a vacuum. Such element, however, is not required in this claim. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape in various dimensions. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8; p. 110 line 12 – p. 115 line p. 4; p. 118 lines 9-13). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry….The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal….Combinations can be made for example by brazing, soldering, gluing, cementing, insetting, pegging, and sewing…" (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21).
the decoration component is mechanically fit with the hard material to hold the precious metal therein and	Hawke teaches providing the insert within the recessed middle portion circumferentially formed in an outer surface of the ring. Hawke teaches that the insert will be a tight fit on the recessed middle portion. (pp. 1-3; Figs. 1 and 3). Bager teaches "finishing the surfaces of said blank according to taste and turning into the periphery thereof an external annular groove having upstanding side walls; providing a strip of metal of the same or another variety having a section which will adapt it to fit the said groove when conformed thereto…curving the ornamenting strip into a ring surrounding the body portion in the groove thereof". (col. 1, lines 14-24; Figs. 6, 8, and 9). Rein teaches providing a finger ring with a recess on its outer surface within which precious stones, plastics,

	ceramics, glass, amber, or other material can be inserted. Rein teaches that a variety of metallic decorative constructions are possible. (col. 1, lines 32-36; col. 7, lines 17-40; col. 10, lines 33-35; col. 11, lines 53-59; Figs. 5, 12-15). West has admitted that joining two different metals together was well known in the prior art. West has testified that what is unique and new about his method of inlaying another metal into a tungsten carbide is melting the metal in the tungsten carbide substrate in a vacuum. Such element, however, is not required in this claim. (p. 110 line 12 – p. 115 line p. 4; p. 118 lines 9-13). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry….The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal….Combinations can be made for example by brazing, soldering, gluing, cementing, insetting, pegging, and sewing…" (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21).
wherein an outer surface of the precious metal forms a smooth transition with each facet.	The '259 patent teaches inserts that necessarily form a smooth transition with the outer surface because the inserts are "openings are formed to a depth equal to the thickness of said inserts." (Col. 4, lines 9-10.) Hawke teaches that an outer surface of the precious metal insert forms smooth transition with each facet. (Fig. 3). Bager teaches that an outer surface of the ornamenting strip forms a smooth transition with each facet. (Fig. 9). Rein teaches that a variety of metallic decorative constructions are possible. (col. 7, lines 17-33; Figs. 12 and 13). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry….The

	compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal….Combinations can be made for example by brazing, soldering, gluing, cementing, insetting, pegging, and sewing…" (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21).
Claim 5	
The finger ring of claim 1, wherein the annular body includes design details that are maintained in their original configuration indefinitely.	Lederrey states, "[t]he hardness of the material obtained by sintering a tungsten carbide powder is about 9 in the Moh's scale. Said material is thus harder than topaz, which is about 8 in the Moh's scale….A piece made of sintered tungsten carbide will therefore not be scratched by the usual materials….The improved watch case according to the invention has thus the advantage to keep its original appearance during a period which is practically non-limited, even if it is carried under the most extensive conditions. Its polished outer surfaces will always show the same brightness and it will never be damaged by scratches." (col. 5, lines 21-26 and 33-49). Rein teaches that a variety of metallic decorative constructions are possible. Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-14). West has admitted that the compositions/formula of tungsten carbide material and the method of making tungsten carbide blanks used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has admitted that, prior to his conception of a tungsten carbide ring, carbide companies had been manufacturing tungsten carbide blanks of any desired shape in various dimensions. Further, West has admitted that a grind shop, not West himself, was the one who turned the tungsten carbide blanks into rings as grinding a tungsten carbide blank was well known in the prior art. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p.

	90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8). McKinnon testified that providing the annular body with any desired surface profile or shape was well known in the prior art. Also, McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon. (McKinnon deposition, p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9; p. 163 line 22 through p. 164 line 3). Iler states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry….The compositions of this invention can be used alone or in combination with any structural materials or materials of apparel including metal….Combinations can be made for example by brazing, soldering, gluing, cementing, insetting, pegging, and sewing…" (col. 5, line 64 through col. 6, line 1). Further, Iler states that "[m]ethods for fabricating such item of jewelry as well as methods for cutting, shaping and polishing the dense compositions will be apparent to those skilled in the art" (col. 6, lines 19-21). Also, the annular body in Iler is unusually scratch-resistant and very durable and can be worn for extended periods without being marred or tarnished (col. 6, lines 25-28 and lines 41-45; col. 1, lines 49-58). Stanley testified that any desired shape or surface could be formed, and any design details would be maintained in their original configuration indefinitely because the ring was made of very hard material of tungsten carbide (p. 26 lines 1-4;p. 29 lines 2-11; p. 33 lines 2-6; p. 71 lines 6-7).
Claim 6	
The finger ring of claim 1, wherein the hard material	Fujimora teaches that the hard material consists essentially of sintered tungsten carbide. (col. 1, lines 4-17, 20-27; col.

consists essentially of sintered tungsten carbide.	2, lines 22-45). Nippon Tungsten teaches that the hard material consists essentially of sintered tungsten carbide. (English translation of Abstract). Maruyama teaches that a hard alloy containing tungsten carbide and a binding metal is prepared by a powder metallurgical method, wherein the hard alloy contains tungsten carbide as much as 91 weight percent. (English translation of Abstract; table 1 on page 254). Lederrey teaches providing a mixture of a powder of tungsten carbide and a powder of a bonding metal. (col. 1, lines 65-69). Lederrey states that the "mixture is then submitted to a preliminary sintering so as to form a solid block which can however still be machined easily for instance by means of a diamond tool. Pieces having a shape similar to that of the workpieces which are to be manufactured are then cut from said block and introduced into a furnace to carry out the final sintering thereof." (col. 1, lines 9-42; col. 1, line 65 – col. 2, line 8; col. 2, lines 25-29, 49-51, 55-60, and 67-69; col. 3, lines 3-6, 17-29, 37-40; col. 3, line 70 – col. 4, line 2; col. 5, lines 4-26, 33-57, and 63-67; Figs. 1 and 7). Rein states, "it is advantageous to make both the contacts and the surrounding ring elements of material which is as hard and abrasion-resistant as possible, for instance steel, tungsten carbide or non-ferrous metal alloys, since less wear thus takes place upon use." (col. 7, lines 17-40; col. 2, lines 25-26; Figs. 12-14). West has admitted that the compositions/formula of tungsten carbide material, the method of making tungsten carbide blanks, and sintering process, used for West's tungsten carbide ring were known in the prior art and were not invented by him. West has acknowledged a tungsten-carbide based watch and watch bracelet made by Rado as prior art, based upon which he developed his tungsten carbide ring. (West deposition, p. 45 line 16 – p. 46 line 21; p. 54 line 21 – p. 55 line 12; p. 57 lines 3 – 6; p. 58 lines 18 – 24; p. 59 line 9 – p. 61 line 3; p. 74 lines 4-10; p. 88 line 9 – p. 89 line 14; p. 90 lines 13 – p. 94 line 23; p. 95 line 23 – p. 96 line 21; p. 97 line 20 – p. 100 line 24; p. 104 line 10 – p. 105 line 22; p. 108 lines 3 – 8).

	McKinnon testified that the compositions/formula of tungsten carbide material used for West's tungsten carbide ring was known in the prior art and had been developed and chosen by McKinnon. Also, McKinnon testified that sintering tungsten carbide was well known in the prior art (McKinnon deposition, p. 17 line 20 through p. 18 line 20; p. 25 line 19 through p. 28 line 1; p. 29 line 8 through p. 31 line 14; p. 35 line 13 through p. 36 line 6; p. 47 line 8 through p. 48 line 2; p. 50 lines 10-16; p. 60 lines 14-18; p. 61 lines 12-14; p. 63 line 22 through p. 64 line 1; p. 64 lines 14-25; p. 65 lines 3-25; Exhs. 400, 401, 402, 403, and 405; p. 68 line 13 through p. 69 line 1; p. 73 lines 1-7; p. 112 lines 12-25; p. 133 lines 18-25; p. 153 line 24 through p. 154 line 9). Iler teaches that the hard material contains 70 volume percent of sintered tungsten carbide (col. 2, lines 24-27; col. 9, lines 56-58; col. 8, lines 67-70; col. 1, lines 48-55; col. 6, lines 25-28 and lines 41-45; col. 5, lines 49-51; col. 10, lines 37-46). Iler further teaches that suitable carbides such as tungsten carbide can be prepared by means well-known to the art or they can be obtained commercially (col. 4, lines 24-26), and states that "[i]tems of jewelry are so well known and the size, shapes, combinations of materials used and areas of use are so broad that it is impossible and should be unnecessary [*sic*] to list all possible types of jewelry" (col. 5, lines 64-67). Also, Iler acknowledges scratch resistant watch cases of cobalt-bonded tungsten carbide compositions as prior art (col. 7, lines 46-48). Stanley ring is a finger ring, wherein the hard material consisted essentially of sintered tungsten carbide (p. 32 lines 7-12; p. 33 lines 16-18; p. 52 lines 14-22; p. 25 line 22 through p. 26 line 4).

V. DOCUMENT PRODUCTION UNDER LOCAL PATENT RULE 3-4

With respect to the documents required under Patent L.R. 3-4(a), other than the

documents already produced or made available[1] to Plaintiff, Crown Ring has no additional documents to produce at this time.

Regarding the prior art identified herein per Patent L.R. 3-3(a), copies of the prior art reference Nos. 1 through 8 were previously produced in connection with Crown Ring's original Preliminary Invalidity Contentions served on September 25, 2007. Each item of the prior art reference Nos. 9 through 20 were cited in the prosecution of the Patents in suit and listed under "References Cited" on the title pages of the Patents in suit. The reference Nos. 21 through 23 are based on deposition transcripts and exhibits attached thereto, copies of which Plaintiff already has.

Dated: November 17, 2008

/s/ R. Joseph Trojan
R. Joseph Trojan
TROJAN LAW OFFICES
Attorney for Defendant, Crown Ring, Inc.

TROJAN LAW OFFICES
BEVERLY HILLS

[1] Crown Ring proposed to produce all of its ring samples upon Plaintiff's payment of the costs of them, since there are so many different models and the ring samples are costly. Producing all of the different models will cost Crown Ring thousands of dollars or more. However, Plaintiff has never responded to Crown Ring's proposal and never requested such ring samples.